

CLAIMS

What is claimed is:

- 1 1. A method for equipping a simulator with plug-ins, comprising the steps of:
 - 2 (a) executing a first simulator for generating a first model, wherein the first
 - 3 simulator is written in a first programming language;
 - 4 (b) executing a second simulator for generating a second model, wherein the
 - 5 second simulator is written in a second programming language, and the first
 - 6 simulator interfaces with the second simulator via a plug-in; and
 - 7 (c) co-simulating utilizing the first model and the second model.
- 1 2. A method as recited in claim 1, wherein an accuracy and speed of the co-
- 2 simulation is user-specified.
- 1 3. A method as recited in claim 1, wherein the first simulator is cycle-based and
- 2 the second simulator is event-based.
- 1 4. A method as recited in claim 1, wherein the co-simulation includes
- 2 interleaved scheduling.
- 1 5. A method as recited in claim 1, wherein the co-simulation includes fully
- 2 propagated scheduling.
- 1 6. A method as recited in claim 1, wherein the simulations are executed
- 2 utilizing a plurality of processors.
- 1 7. A method as recited in claim 1, wherein the first simulator may be executed
- 2 ahead of or behind the second simulator.

1 8. A method as recited in claim 1, wherein the first simulator is coupled to the
2 second simulator via a network.

1 9. A computer program product for equipping a simulator with plug-ins,
2 comprising:
3 (a) computer code for executing a first simulator for generating a first model,
4 wherein the first simulator is written in a first programming language;
5 (b) computer code for executing a second simulator for generating a second
6 model, wherein the second simulator is written in a second programming
7 language, and the first simulator interfaces with the second simulator via a
8 plug-in; and
9 (c) computer code for co-simulating utilizing the first model and the second
10 model.

1 10. A computer program product as recited in claim 9, wherein an accuracy and
2 speed of the co-simulation is user-specified.

1 11. A computer program product as recited in claim 9, wherein the first
2 simulator is cycle-based and the second simulator is event-based.

1 12. A computer program product as recited in claim 9, wherein the co-simulation
2 includes interleaved scheduling.

1 13. A computer program product as recited in claim 9, wherein the co-simulation
2 includes fully propagated scheduling.

1 14. A computer program product as recited in claim 9, wherein the simulations
2 are executed utilizing a plurality of processors.

1 15. A computer program product as recited in claim 9, wherein the first
2 simulator may be executed ahead of or behind the second simulator.

1 16. A computer program product as recited in claim 9, wherein the first
2 simulator is coupled to the second simulator via a network.

1 17. A system for equipping a simulator with plug-ins, comprising:
2 (a) logic for executing a first simulator for generating a first model, wherein the
3 first simulator is written in a first programming language;
4 (b) logic for executing a second simulator for generating a second model,
5 wherein the second simulator is written in a second programming language,
6 and the first simulator interfaces with the second simulator via a plug-in; and
7 (c) logic for co-simulating utilizing the first model and the second model.

1 18. A system as recited in claim 17, wherein an accuracy and speed of the co-
2 simulation is user-specified.

1 19. A system as recited in claim 17, wherein the first simulator is cycle-based
2 and the second simulator is event-based.

1 20. A system as recited in claim 17, wherein the co-simulation includes
2 interleaved scheduling.